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AUTHOR Hull, Jay G.; And Others
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ABSTRACT

Much research has found that information encoded according to its self-relevance is more easily recalled than information encoded according to other formats. Two experiments were conducted to examine potential moderators of the processes involved in self-relevant memory. In the first study, the hypothesis was tested that self-relevant encoding is a joint function of: (1) the nature of the task; (2) variables that affect the cognitive availability of information about the self; and (3) the pre-existing nature of the self. The results from 48 college students involved in the study revealed that the traditional effect, namely, that processing information according to its self-relevance facilitates incidental recall, depended on the individual's level of self-consciousness and the degree to which the target information was consistent with the pre-existing experiences of the self. Experiment 2 examined the hypothesis that self-consciousness affects behavior because it is associated with an increased facility in processing information according to its self-relevance. The results from 38 college students revealed that private self-consciousness was associated with heightened affective reactions to performance feedback; individual differences in recall of self-relevant information were associated with heightened affective reactions to performance feedback; and partialling out the effects of self-relevant memory skills eliminated the effects of private self-consciousness. (Author/NB)

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Jay G. Hull, Ronald R. Van Treuren, Susan J. Ashford, Pamela Propsom,

and Bruce W. Andrus

Dartmouth College

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Exploring the Connections between Self, Cognition, and Behavior

Jay G. Hull, Ronald R. Van Treuren, Susan J. Ashford, Pamela Propsom,

and Bruce W. Andrus

Dartmouth College

Abstract

Two experiments were conducted to examine the causes and effects of processing information according to its self-relevance. In experiment 1, the traditional effect that processing information according to its self-relevance facilitates incidental recall (e.g. Rogers, et al. 1977) was found to depend on the individual's level of self-consciousness and the degree to which the target information was consistent with the pre-existing experiences of the self. Experiment 2 examined the hypothesis that self-consciousness affects behavior because it is associated with an increased facility in processing information according to its self-relevance. As predicted, private self-consciousness was associated with heightened affective reactions to performance feedback; individual differences in recall of self-relevant information were associated with heightened affective reactions to performance feedback; and partialling out the effects of self-relevant memory skills eliminated the effects of private self-consciousness.

Exploring the Connections between Self, Cognition, and Behavior

Numerous researchers have found that information encoded according to its self-relevance is more easily recalled than information encoded according to other formats (e.g., Kuiper & Rogers, 1979; Rogers, Kuiper, & Kirker, 1977). Subsequent research has focused on identifying the processes responsible for this effect. Research by Wells, Hoffman, and Enzle (1984) suggests that at least part of the advantage is associated with encoding as opposed to retrieval processes. Hull and Levy (1979) and Agatstein and Buchanan (1984) have shown that the effect is associated with processes involved in self-consciousness. On the other hand, incidental memory for self-relevant information does not appear to be mediated by the desirability (Ferguson, Rule, & Carlson, 1983; McCaul & Maki, 1984), emotionality, self-rated importance, or distinctiveness of the stimuli (Ganellen & Carver, 1985).

The purpose of the present studies is to examine potential moderators of the processes involved in self-relevant memory. We propose that the processes involved in encoding information according to its self-relevance are a joint function of at least three factors. First, the nature of the task in which the individual is involved. In its most direct form, the task may instruct the individual to encode information as self-relevant (Rogers, et al. 1977). Second, variables that affect the cognitive availability of information about the self. Hull and Levy (1979) propose that individuals high in dispositional self-consciousness differ from low self-conscious individuals in the chronic extent to which information about self is available and hence the ease with which it is activated. Third, the degree to which information is processed as self-relevant depends on the pre-existing nature

of the self. Processing information as self-relevant should be facilitated to the extent that the information is consistent with pre-existing nature of the self.

Experiment 1

The purpose of experiment 1 was to test the hypothesis that self-relevant encoding is a joint function of these three sets of variables. Specifically, the nature of the task was manipulated by having subjects rate adjectives according to their self-relevance or semantic content. The nature of the self was manipulated by assigning subjects success or failure feedback on a different task prior to the incidental memory task. The correspondence of self and information was investigated by including both depressive content and nondepressive content words in the incidental memory task: self and information are therefore correspondent in the failure-depressive content and success-nondepressive content conditions. Finally, the availability of information about the self was manipulated by dividing subjects into high and low private self-conscious groups. A four-way interaction was predicted such that following success high self-conscious individual would recall more self-relevant than semantic encoded nondepressive content words, and following failure high self-conscious individuals would recall more self-relevant than semantic encoded depressive content words.

Method

Subjects

Subjects were twenty-six males and twenty-two females who participated in partial fulfillment of a course requirement. The self-consciousness inventory developed by Fenigstein, Scheier, & Buss (1975) was used to classify subjects according to their level of private self-consciousness.

Procedure

Success-failure manipulation. Subjects were run in small groups of five to eleven individuals. On arriving, they were told that they would be participating in a study of spatial abilities and worked on an embedded figures test. This test was modified to create two experimental tasks: in the success condition, fifteen of the sixteen problems were solvable, whereas in the failure condition, only four of the sixteen problems were solvable.

Encoding Task. The dependent measure of informational encoding was introduced as a separate experiment. For this task, subjects rated a list of words one at a time according to either its semantic meaning ("does this word have a specific meaning or relate to a specific situation?") or its self-relevance ("does this word describe you?"). The list of words read by the experimenter consisted of thirty depressed content adjectives and thirty nondepressed content adjectives in a random order (Kuiper & Derry, 1982). After completing the ratings, subjects were told to turn over their rating sheets and write down as many of the words as they could remember. Subjects did not anticipate this memory task.

Results

For purposes of analysis a median split was conducted on the measure of private self-consciousness.

Manipulation Checks

The two embedded figure tests were effective in yielding different perceptions of success and failure. Subjects assigned to the success condition rated themselves as having done much better than those subjects in the failure condition $F(1,44) = 71.94$, $p < .001$.

Incidental Recall Data

A repeated measures analysis of variance was performed on the incidental recall data. Differences in word recall frequency were analyzed as a function of the between subject variables of private self-consciousness and success/failure and the within subject variables of rating task (semantic/self-referenced) and word content (depressed/nondepressed).

Consistent with previous research, there was a main effect of encoding task such that words rated on the criterion of self-reference were recalled more frequently than those rated for a semantic meaning, $F(1,44) = 21.04$, $p < .001$. In addition, there was a main effect of depressive content such that nondepressive content words were more easily recalled than depressive content words, $F(1,44) = 63.97$, $p < .001$, although an interaction of content and self-consciousness indicated that this was primarily true for high self-conscious individual, $F(1,44) = 4.87$, $p < .05$.

From the perspective of the predictions, the most interesting effects are those higher order interactions that involve the encoding task. Thus, there was a significant interaction of encoding task and depressive content such that nondepressed content self-referenced words were most frequently recalled $F(1,44) = 6.09$, $p < .02$. This two-way interaction was qualified by a three-way interaction involving success/failure $F(1,44) = 4.26$, $p < .05$. Finally, this three way interaction was qualified by the predicted four-way interaction between rating task, word content, success/failure, and private self-consciousness, $F(1,44) = 4.87$, $p < .05$. The mean word recall for this 2 x 2 x 2 x 2 classification is presented in Table 1.

Table 1 about here

To clarify this four-way interaction, separate analyses were conducted for each of the private self-conscious groups. The principal differences between the groups involved the effects of success-failure manipulation. For high self-conscious individual there was a significant interaction of success-failure and encoding task, $F(1,23) = 4.56$, $p < .05$, that was further qualified by a triple interaction of success-failure, encoding task, and word content, $F(1,23) = 7.70$, $p = .01$. The nature of these interactions is as predicted: the self-relevant versus semantic encoding difference was greatest for nondepressed content words following success and for depressed content words following failure. On the other hand, success-failure did not enter into any effects or interactions for low private self-conscious individual (all Fs < 1.00).

Discussion

The results of experiment 1 support the notion that self-relevant memory is a joint function of the nature of the encoding task (semantic vs. self-relevant), the pre-existing nature of the self (as manipulated by success-failure) and its correspondence to incoming information (depressive vs. nondepressive content words), and the availability of self-relevant encoding schemes as measured by dispositional self-consciousness. This study is noteworthy in several respects. First, no previous study has manipulated the pre-existing nature of the self to show that information that corresponds to the self is more likely to be encoded as self-relevant. Second, no previous study has attempted to show the joint dependence of all three variables.

A second experiment was conducted to more precisely specify the underlying reasons for the effects of private self-consciousness. Hull and Levy (1979) have argued that self-consciousness corresponds with a

heightened tendency to encode information as self-relevant. Study 2 therefore attempted to independently assess individuals' private self-consciousness and dispositional tendency to encode information as self-relevant. If Hull and Levy (1979) are correct, (a) self-consciousness should be related to self-relevant memory, (b) classifying individuals according to their self-consciousness should be associated with similar behavioral effects as classifying individuals according to their dispositional tendency to encode information as self-relevant, and (c) partialling out the effects of dispositional tendency to encode information as self-relevant should eliminate the effects of self-consciousness.

Experiment 2

Method

Subjects

Subjects were thirty eight undergraduates who participated in partial fulfillment of a course requirement. All subjects participated in a group testing session approximately two months prior to the actual experiment during which they completed the self-consciousness inventory (Fenigstein et al., 1975).

Procedure

Assessment of encoding strategies. Dispositional tendency to encode information as self-relevant was assessed with the incidental memory paradigm described in Experiment 1. Subjects rated a series of thirty words according to either their structural, semantic, or self-relevant content. They were then asked to recall as many words as possible in an unanticipated memory task.

Assessment of behavioral reactivity. Given that private self-consciousness is associated with increased negative affective reactions and

lowered behavioral expectations following failure (see Carver & Scheier, 1981), these were chosen as the target behaviors. Following completion of the incidental memory task, subjects worked the embedded figures task used in Experiment 1 to insure failure. This task was described as unrelated to the first task and was introduced by a different experimenter. Subjects' affective reactions following failure were assessed with the Mood Adjective Checklist. They were asked to estimate their anticipated performance on a subsequent embedded figure "test item," and their persistence on this unsolvable test item was surreptitiously assessed.

Results

Of greatest relevance to the present hypotheses, there was a significant correlation between private self-consciousness and memory for words encoded as self-relevant, $r(38) = .37$, $p = .01$. In addition, there was a significant correlation between private self-consciousness and self-rated sadness following failure, $r(38) = .29$, $p = .04$. Furthermore, there was a significant correlation between memory for words encoded as self-relevant and self-rated sadness, $r(38) = .29$, $p = .04$. And finally, the correlation between private self-consciousness and sadness was no longer significant after partialling out the effects of self-relevant memory, $r(38) = .19$, $p > .10$. The effects of self-consciousness and self-relevant memory on expectations for future performance and persistence were weaker and not significant.

Conclusion

These experiments help to clarify the processes involved in self-relevant memory. Specifically, these processes appear to depend on the nature of the encoding task, the pre-existing nature of the self and its correspondence with information to be encoded as self-relevant, and processes

involved in self-consciousness. Furthermore, the effects of self-consciousness appear to be due in part to the fact that it is associated with a dispositional tendency to encode information as self-relevant. Hopefully these results will clarify the nature of self and the ways in which it influences behavior.

Table 1

Experiment 1: Incidental Memory for Stimulus Words

High Private Self-consciousness

	Depressed Content		Nondepressed Content	
	Sem.	S-r	Sem.	S-r
Failure	.92	1.29	2.33	2.21
Success	1.15	1.38	1.58	3.04

Low Private Self-consciousness

	Depressed Content		Nondepressed Content	
	Sem.	S-r	Sem.	S-r
Failure	1.00	1.32	1.36	2.36
Success	1.04	1.38	1.29	2.21

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